

From DE 29622384 a floating covering layer consisting of synthetic material is known.

A vessel covering with a foil or sheet cover is shown in DE 19504740.

The use of added substances causes a reduction of the emissions by means of the change of the characteristics of the emittents. The reduction of the pH-value with the adding of acid is very effective. The use of organic acids, as described for example in DE 4139682 A1, is particularly environmentally compatible. In emittents containing acid-forming micro organisms, the acid formation and subsequently the pH-value-reduction can be forced by adding glucose, saccharose or an easily degradable organic substance, as described in DE 19714588.

Treatment processes such as solid-liquid-separation, stripping or their combination can also reduce the emissions to a great extent. However, they also involve very high costs.

The measures known up to the present for the reduction of the emissions as stated above have one, more or all of the following disadvantages:

- They have a low effect
- They are aimed at only individual emissions
- They increase other emissions
- They cause high costs.

For this reason the task assignment of the invention is to offer covering materials which effectively reduce the emissions and which do not have a disadvantageous effect on other emissions and which do not cause high expenditures.

The solution of the task assignment is effected with the features of the Claims 1 and 12.

Advantageous embodiments are stated in the Sub-Claims.

**REPLACED BY
ART 34 AMDT**

In this way, the covering material according to the invention for liquid substances and product heaps consists of an inert carrier material that is combined with active additives.

In an advantageous embodiment of the invention, the inert carrier material consists of solid materials such as straw, granulates, bentonites, expanded clay and further possibly porous mineral materials with a density of less than 1 g/cm³, turf and foils. According to the invention and as active additives, pH-value-reducing substances or substance mixtures are put into the inert carrier material.

In an advantageous embodiment of the invention the active additives are, in particular, acids and salts which show an acidic reaction in water solution. In particular, inorganic and organic acids and their salts are applied as acids.

In a further advantageous embodiment, lactic acid and its salts (lactates) are put into the carrier material.

In a further advantageous embodiment of the invention, convertible substances are added to the inert carrier material by means of micro organisms or enzymes which form acid during the sequence of the microbiological conversions. According to the invention, substances containing carbohydrates are suitable for this purpose. In particular, organic residual substances containing sugar and carbohydrates can be advantageously and inexpensively added to the carrier materials.

In this way and in a further embodiment of the invention, glucose, saccharose or molasses are adopted.

The covering material according to the invention is produced by mixing the inert carrier material with the active additives.

REPLACED BY
ART 34 AMDT

Patent Claims

1. Covering material for liquid substances and product heaps consisting of an inert carrier material that is combined with active additives.
2. Covering material for liquid substances and product heaps according to Claim 1, wherein the inert carrier material consists of solid materials such as straw, granulates, bentonites, expanded clay, further mineral materials with a density below 1 g/cm³, turf, foils or their mixtures.
3. Covering material for liquid substances and product heaps according to Claims 1 or 2, wherein the active additives are pH-value-reducing substances or substance mixtures.
4. Covering material for liquid substances and product heaps according to one of the Claims 1 to 3, wherein the active additives are acids and salts.
5. Covering material for liquid substances and product heaps according to one of the Claims 1 to 4, wherein the active additives are inorganic and organic acids and salts.

**REPLACED BY
ART 34 AMDT**

10

6. Covering material for liquid substances and product heaps according to one of the Claims 1 to 5, wherein the active additives are lactic acid and its salts.
7. Covering material for liquid substances and product heaps according to one of the Claims 1 to 6, wherein the active additives are convertible substances by means of micro organisms or enzymes.
8. Covering material for liquid substances and product heaps according to one of the Claims 1 to 7, wherein the active additives are carbohydrate-containing substances.
9. Covering material for liquid substances and product heaps according to one of the Claims 1 to 8, wherein the active additives are sugar-containing and/or carbohydrate-containing organic residual substances.
10. Covering material for liquid substances and product heaps according to one of the Claims 1 to 9, wherein the active additives are glucose, saccharose, molasses.

**REPLACED BY
ART 34 AMDT**

11

11. Covering material for liquid substances and product heaps according to one of the Claims 1 to 10, wherein the carrier materials containing active additives are combined with foils which are predominantly permeable for hydrogen-ions only.
12. Method for the production of covering material according to Claim 1, wherein the inert carrier material is mixed with active additives.
13. Method for the production of covering material according to Claim 12, wherein the active additives are fixed on the surface of the inert carrier material.
14. Method for the production of covering material according to Claims 11 or 13, wherein the inert carrier materials provided with active additives are subjected to a hydrophobising treatment.
15. Method for the production of covering material according to one of the Claims 11 to 14, wherein the inert carrier material is heated before mixing and/or fixation with active additives.

REPLACED BY
ART 34 AMDT

16. Method for the production of covering material according to one of the Claims 11 to 15,
wherein
the inert carrier material is heated to a temperature of between 100 and 700°C before active additives are put in.
17. Method for the production of covering material according to one of the Claims 1 to 16,
wherein
stearates, silicane emulsions or other hydrophobising substances are applied as hydrophobising agents.
18. Method for the production of covering material according to one of the Claims 11 to 17,
wherein,
between the covering material and emittents, a foil is placed which is predominantly permeable for hydrogen-ions only.

REPLACED BY
ART 34 AMDT